

**TITLE 11**  
**DEPARTMENT OF HEALTH**  
**CHAPTER 104**  
**MANAGEMENT AND DISPOSAL OF INFECTIOUS WASTE**

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**§11-104-1 Purpose.**

The purposes of these rules, which shall be known as the Hawaii Rules for Management and Disposal of Infectious Waste, are to implement the requirements of section 321-21, Hawaii Revised Statutes ("HRS"); and to establish minimum requirements for the management, treatment, transport, storage and disposal of infectious waste and treated infectious waste in order to assure practices which will protect the health and safety of persons living in Hawaii. These rules are not intended and shall not be construed to lower the standards and requirements found in ordinances, codes, or rules established by this or other government agencies. In all instances, the more stringent rules shall apply [Eff OCT 22, 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21, 321-20)

**§11-104-2 Definitions.**

As used in this chapter: "Autoclaving" means rendering sterile by exposing to steam of appropriate temperatures under given pressures for appropriate time periods using *Bacillus* spp. spore kill time as a guide in accordance with the National Committee for Clinical Laboratory Standards: "Clinical Laboratory Hazardous Waste" 1986.

"Blood, blood products, and other body fluids" means all waste blood and blood products such as serum, plasma, and other blood components, and all body fluids. It includes items saturated or dripping with blood or with body fluids and those caked with dried blood or with dried body fluids.

"Body fluids" means semen, vaginal secretions, cerebrospinal, synovial, pleural, peritoneal, and amniotic fluid. It does not mean nasal secretions, sputum, tears, urine, and vomitus unless they contain visible blood.

"Contaminated animal carcasses, body parts, and bedding" means carcasses, body parts, tissues, and bedding of animals that have been, or are believed to have been intentionally exposed to pathogens infectious to humans.

"Contaminated sharps" means all discarded sharp items, including but not limited to hypodermic needles, syringes, Pasteur pipettes, scalpel blades, lancets, capillary tubes, slides, and broken glass which have been used in the diagnosis, treatment or immunization of human beings or animals, in research pertaining thereto, or in the production, use or testing of biologicals.

"Cultures and stocks of infectious agents" means cultures and stocks of infectious agents from medical, clinical, pathological laboratories, cultures and stocks of infectious agents from research and industrial laboratories, wastes from the production of biologicals, discarded live and attenuated vaccines, culture dishes and devices used to transfer, inoculate, or mix cultures and glassware which has contained infectious agents.

"Department" means the Department of Health, State of Hawaii.

"Disinfect" means to inactivate virtually all recognizable pathogenic microorganisms, but not necessarily all microbial forms (e.g., bacterial endospores).

"Facility" means a building within which infectious waste is generated.

"Generator" means any person, corporation, agency which produces, or causes to be produced infectious waste, including but not limited to hospitals; clinics; laboratories; health care facilities, agencies and providers; physicians, dentists, veterinarians, and podiatrists.

"Incineration" means a controlled process under permit pursuant to chapters 11-60, Air Pollution Control, and 11-58, Solid Waste Management Control, Hawaii Administrative Rules, by which waste undergoes complete combustion and becomes carbonized or mineralized sterile ash.

"Infectious isolation waste" means biological waste and discarded material contaminated with blood, body fluids, excretions, exudates, or secretions from patients with diseases considered communicable and requiring isolation as defined by the Centers for Disease Control's "Guideline for Isolation Precautions in Hospitals, 1983".

"Infectious waste" means any waste which may contain pathogens capable of causing an infectious disease and shall include, but not be limited to, wastes categorized in section 11-104-4.

"Pathological waste" means all human tissues, organs, and body parts that are removed during surgery, autopsy, obstetrical, and other medical or diagnostic procedures. All pathological waste shall be considered infectious waste and be subject to this chapter.

"Point of generation" means the location at which a material is discarded and becomes a waste.

"Sterilization" means the use of physical or chemical procedures to destroy all microbial life, including highly resistant bacterial endospores.

"Storage" means the holding of infectious or treated infectious waste which is awaiting treatment or transport, in such a manner as not to constitute disposal of such waste as required under section 11-104-9.

"Transport" means the movement of infectious waste and treated infectious waste from point of generation to any intermediate point inside or outside the facility and finally to the point of disposal.

"Transporter" means any person, corporation, or agency who transports infectious waste or treated infectious waste.

"Treated" means exposed to any method or process which changes the character of the waste so as to render such waste noninfectious.

"Treated infectious waste" means infectious waste which has been incinerated, sterilized, or chemically disinfected by methods delineated in section 11-104-5:

"Waste" means any material which is discarded, or is meant to be discarded. [Eff 22 1990) (Auth: HRS §§3 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

### **§11-104-3 Prohibited acts.**

No person shall handle, treat, dispose of, transport, or store infectious waste or treated infectious waste except in accordance with (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

### **§11-104-4 Categories of infectious waste.**

Categories of infectious waste are as follows:

- (1) Infectious isolation waste;
- (2) Cultures and stocks of infectious agents;
- (3) Blood, blood products and body fluids;
- (4) Pathological waste;
- (5) Contaminated sharps; and
- (6) Contaminated animal carcasses, body parts, and bedding. [Eff OCT 22 1990] Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

### **§11-104-5 Handling and treatment of infectious waste.**

- (a) Infectious waste shall be incinerated, sterilized, or chemically disinfected by methods recommended for waste treatment by Centers for Disease Control's ("CDC") "Recommendations for Prevention of HIV transmission in Health-Care Settings, MMWR 1987"; or the CDC's "Update: 'Universal Precautions' for prevention of transmission of HIV immunodeficiency virus, hepatitis B virus and other blood borne pathogens in health-care settings MMWR June 1988"; or the U.S. Environmental Protection Agency's "Guide for Infectious Waste Management", May 1986; or Part

1910 of Title 29 of the Code of Federal Regulations, Subpart Z, before their disposal; or by other methods approved by these agencies or the department.

(b) Infectious waste shall be segregated from all other waste at the point of generation.

(c) The types of infectious waste described in section 11-104-4 shall be managed and treated as follows:

(1) Infectious isolation waste

(A) Infectious isolation waste shall be deposited at the point of generation into containers lined with nonsoluble plastic bags which are clearly marked with the Universal Biological Hazard symbol, or into red plastic bags.

(B) All plastic bags shall meet the requirements of section 11-104-6(b).

(C) Bags used for autoclaving shall also be marked with the Universal Biological Hazard Symbol.

(D) All bags shall be tightly closed before being transported so as to contain the waste completely, and the waste shall be transported in accordance with sections 11-104-6 and 11-104-7.

(E) Sterilization shall be by autoclaving or incineration.

(2) Cultures and stocks of infectious agents shall be sterilized or incinerated.

(3) Blood, blood products and body fluids, all of which are considered infectious, shall be incinerated, sterilized, disinfected, or disposed of via a waste water disposal system approved by the department under chapter 11-62.

(4) Pathological waste.

(A) Shall be incinerated, sterilized, or disinfected; sterilized or disinfected material may be finely ground and flushed into a drain leading to a waste water disposal system approved by the department under chapter 11-62.

(B) Recognizable human body parts shall be disposed of in accordance with section 11-104-9 (d).

(5) Contaminated sharps.

(A) Contaminated sharps shall be deposited at the point of generation into rigid puncture resistant and leak proof containers, red in color or clearly marked with the Universal Biological Hazard symbol.

(B) Needles shall not be recapped, purposely bent, broken, or otherwise manipulated.

(C) Containers shall be located in the immediate area where sharps are used and shall not be allowed to overfill.

(D) Prior to transport containers shall be closed securely to contain sharps completely and shall remain closed throughout transport, storage, and disposal.

- (E) Sharps shall be sterilized, incinerated, or undergo chemical disinfection prior to disposal.
- (6) Contaminated animal carcasses, body parts and bedding shall be sterilized, incinerated or undergo chemical disinfection in accordance with these rules. (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

**§11-104-6 Transportation of infectious waste within a facility.**

- (a) Untreated infectious waste shall be placed in containers sufficient to contain the waste completely as follows:
- (1) Nonsoluble plastic bags either red in color or clearly labelled with the Universal Biological Hazard symbol; or
  - (2) Sharps containers as described in section 11-104-5(c)(5); or
  - (3) Sturdy leak-proof containers clearly marked with the Universal Biological Hazard symbol.
- (b) The number of plastic bags and the thickness of bags shall be sufficient to contain the waste completely from generation through treatment and storage.
- (c) Bags and other containers of untreated infectious waste shall be tightly closed before transport. The bags and containers of waste shall be transported in leak-proof rigid or semi-rigid portable containment systems or carts, clearly marked with the Universal Biological Hazard symbol.
- (d) Untreated infectious waste shall be transported manually to minimize rupturing and dissemination or aerosolization.
- (e) Reusable carts bins and other containment systems used to transport waste must be cleaned after each use and disinfected daily when in use. [Eff OCT 22 1990 ] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

**§11-104-7 Transportation of infectious waste for treatment away from the generating facility.**

- (a) Infectious waste shall be placed in containers which are sufficient to contain the waste completely as follows:
- (1) Nonsoluble plastic bags, red in color or clearly labeled with the Universal Biological Hazard symbol; or
  - (2) Sharps containers as described in section 11-104-5(c) (5) ; or
  - (3) Sturdy leak-proof containers clearly marked with the Universal Biological Hazard symbol.
- (b) The number of plastic bags and thickness of plastic bags shall be sufficient to contain the waste completely from the generation through treatment.
- (c) The bags and other containers of infectious waste shall be tightly closed before transport. The bags and other containers shall be placed in a rigid, or semi-rigid tightly closed, leak-proof containment system, which shall be clearly marked with the Universal Biological Hazard symbol prior to transport.

(d) Infectious waste in containment systems described in subsection (c) above shall be transported away from the facility in fully enclosed rigid, leakproof containers or vehicle compartments which will prevent scattering, spillage, and leakage of the waste during transport. The transport vehicle shall be labeled with a clearly visible Universal Biological Hazard Symbol.

(e) Untreated waste shall not be compacted.

(f) Containers may be disposable or reusable. Disposable containers which have been in contact with infectious waste shall be sterilized prior to disposal, or incinerated. Reusable containers shall be cleaned after each use and disinfected daily when in use.

(g) Untreated infectious waste shall not be transported with noninfectious waste unless all waste in the load is managed as infectious waste. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

#### **§11-104-8 Storage of infectious waste and treated infectious waste.**

(a) Infectious waste which is being stored while awaiting treatment shall be stored in disposable or reusable sturdy, leak-proof container which have tight-fitting lids or a leak proof fully enclosed room, which are clearly labeled with the Universal Biological Hazard symbol. These containers shall be kept in fully enclosed and secured locations which are inaccessible to animals and to persons not authorized to handle their treatment, transfer, or disposal.

(b) Infectious waste which has been treated and is awaiting transport for disposal shall be stored in fully enclosed and secured areas or containment systems which are accessible only to persons authorized to handle their disposal. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

#### **§11-104-9 Disposal of infectious waste and treated infectious waste.**

(a) All infectious waste and treated infectious waste shall be disposed of in accordance with these rules.

(b) All infectious waste which is not disposed of via a waste water disposal system approved by the department under chapter 11-62 in accordance with subsection 104-5(3) and 104-5(4) shall be treated in accordance with these rules and then disposed of only in state permitted landfills or authorized disposal sites.

(c) Treated infectious waste which has not been incinerated shall be in containers which are clearly marked as treated waste which has been rendered noninfectious.

(d) Recognizable human body parts shall be incinerated or disposed of in accordance with other applicable state laws governing the disposal of human remains.

(e) Incinerator ash shall be disposed of only in state permitted landfills or authorized disposal sites. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

#### **§11-104-10 Infectious waste management plan.**

(a) Each infectious waste generator and transporter of untreated infectious waste shall have a written plan which contains policies and detailed procedures for the safe and effective management of infectious waste which is in accordance with these rules. A copy of this plan shall be kept in the respective administrative offices of the generator and the transporter.

(b) The plan shall also provide for contingencies in emergency situations. At a minimum, this shall include procedures to be used under the following circumstances:

(1) Spills of liquid infectious waste. These procedures shall include provisions for containment, protection of personnel, clean up procedures, disinfection and disposal of the spill residue and of contaminated containers ;

(2) Rupture of plastic bags or other loss of containment. These procedures shall include provisions for containment, protection of personnel, clean up procedures, disinfection, and repackaging of waste; and

(3) Equipment failure. These procedures shall include alternative arrangements for waste storage, transportation, and treatment. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)

#### **§11-104-11 Penalty.**

(a) Any person, corporation, or agency that violates any of the provisions of this chapter shall be subject to an administrative penalty not to exceed one thousand dollars for each separate offense. Each day of violation may constitute a separate offense. The violator shall also be subject to the other remedies and provisions of section 321-20, HRS, including recourse to administrative contested case proceedings in accordance with chapter 91, HRS.

(b) The following shall be responsible for any handling, transport, treatment, storage, or disposal of any infectious waste that is not in accordance with this chapter:

(1) The generator of the waste;

(2) Any person who by contract, agreement, or otherwise has arranged to treat, store, transport, or dispose of the waste; and

(3) Any person who accepts or accepted any treated or untreated infectious waste for treatment, storage, transport, or disposal.

(c) There shall be no liability under subsection (b) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the violation of this chapter was caused solely by an act or omission of a third party other than an employee or agent of the person, and other than one whose act or omission occurred in connection with a contractual relationship, existing directly or indirectly, with the person. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-20, 321-21)

#### **§11-104-12 Severability.**

If any provision of this chapter or the application thereof to any person or circumstances is held invalid, the remainder of this chapter, or the application of the provision to other persons or circumstances, shall not be affected thereby. [Eff OCT 22 1990] (Auth: HRS §§321-21, 321-20, 321-11) (Imp: HRS §§321-11, 321-21)